

REMARKS

Claim Amendment:

Applicant has amended claim 4 to clarify the claimed invention and to address a minor typographical error. Further, Applicant notes that the above referenced claim amendment has been made to merely clarify the claimed invention and is not intended to narrow the original scope or spirit of the claim, in any way.

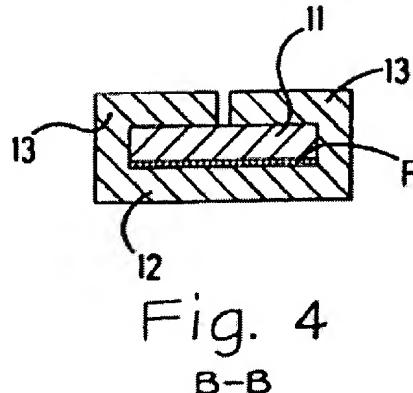
Claim Rejections:

Claims 1, 2, 4, 6, 7, 9 and 10 are all of the claims pending in the present application, and currently all of the claims stand rejected.

35 U.S.C. § 103(a) Rejection - Claims 1, 2, 4, 6, 7, 9 and 10:

Claims 1, 2, 4, 6, 7, 9 and 10 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,135,779 to Koch et al. in view of U.S. Patent No. 4,560,224 to Weisenburger. In view of the following discussion, Applicant respectfully disagrees.

First, Applicant submits that the Examiner's characterization of the Koch reference is in error. Koch discloses a terminal **1**, which has at least four tongues **13**, used to retain a contact arm **11** on a conductive foil **F**. *See* Figures 1-4. The tongues **13** are pressed through the foil **F**, so as to allow the contact arm **11** to press the foil **F** against the surface **12**, and then the tongues **13** are bent towards each other, as shown in Figure 4 (reproduced below for reference).



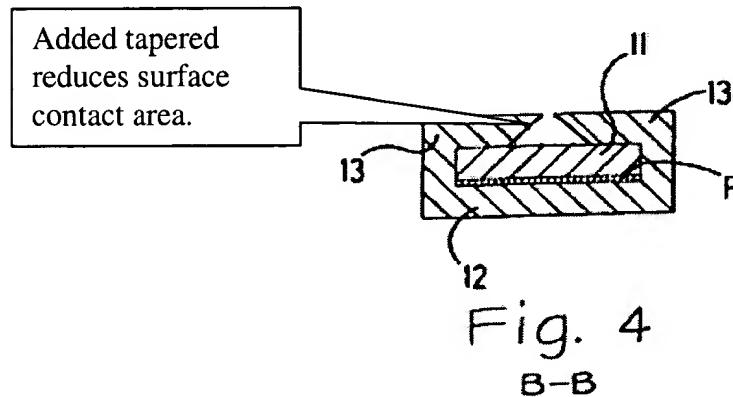
As can be seen in the above Figure, although the tongues 13 can be pressed through the foil F, there is no disclosure of having the tongues 13 being pressed through both a coating and a conductor, as set forth in claims 1 and 4.

Secondly, as the Examiner notes, Koch fails to disclose a taper portion on the tongues 13 which face each other over the flat portion 12, as recited in the pending claims. To cure this deficiency, the Examiner relies on the Weisenburger reference. The Examiner relies on Weisenburger to teach using projections which have tapered surfaces which are internal to a root portion of a projection to facilitate piercing of a material. *See* Office Action dated February 4, 2003, page 2. However, regardless of the teachings of Weisenburger, Applicant submits that one of ordinary skill in the art would not have been motivated to combine the teachings of Weisenburger with those of Koch.

Specifically, Applicant notes that there is no discussion, whatever, within Koch, that the existing tapered aspects of the tongues 13 would require additional tapering. Stated differently, there is no teaching or suggestion of adding a third tapered surface to the already two tapered surfaces of the tongues 13. *See* Koch, Figures 1 and 2, for reference. Applicant submits that this

is particularly true in Koch, because there is no need for an additional tapered surface on the tongues **13** to pierce the foil **F**.

Further, Applicant notes that if the tongues **13** in Koch, were tapered as the Examiner has suggested, the overall operation of the connector **1** in Koch would be adversely affected. It is noted that the purpose of the tongues **13**, in Koch, is to hold the foil **F** and contact arm **11** in place. Applicant submits that this would be adversely affected by modifying the tongues **13** as suggested by the Examiner. Because the tongues **13** do not penetrate the arm **11** or foil **F** (as in the present invention) the existence of an internal tapered surface would reduce the overall surface contact area between the tongues **13** and the arm **11** or the foil. To illustrate this point Applicant has modified Figure 4 of Koch as shown below, to depict tapered surfaces on the tongues **13**.



As shown above, the additional tapers of the tongues **13** would reduce the overall contact area of the tongues **13** on the arm **11**, which is undesirable, and would not be performed by one of ordinary skill in the art. Koch clearly states that “[t]he contact arm **11** is fixed by bending the

free ends of the tongues **13**" over. *See* Koch, col. 3, lines 15-17. Because the tongues **13** are used to hold the arm **11** in place, one of ordinary skill in the art would not be motivated to reduce the contact area, thus reducing the overall fixing force.

Applicant additionally notes that the addition of a third tapered surface on the tongues **13** (Figure 5 clearly shows that the tongues **13** already have two tapered surfaces) would greatly add to the cost and complexity of manufacturing the tongue **13**, while reducing its overall strength and integrity. Again, because of this, one of ordinary skill in the art would not be motivated to make the modifications set forth by the Examiner.

Because of at least these deficiencies, and because of the added complexity and cost of adding a third tapered surface to the tongues **13**, for little or no added benefit, Applicant submits that one of ordinary skill in the art would not have been motivated to combine the teachings of Weisenburger with Koch, or otherwise modify the tongues **13** in Koch as described in the present invention.

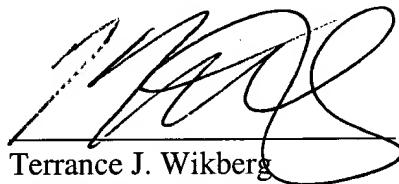
In view of the foregoing, Applicant submits that the Examiner has failed to establish a *prima facie* case of obviousness with respect to claims 1, 4 and 6, because the references, either individually or in combination, fail to teach or suggest each and every feature of the claims, and/or would not have been combined by one of ordinary skill in the art as asserted by the Examiner. Therefore, Applicant hereby requests the Examiner reconsider and withdraw the above referenced 35 U.S.C. § 103(a) rejection of claims 1, 4 and 6. Further, as the remaining claims depend on claims 1, 4 and 6, Applicant submits that these claim are also allowable, at least by reason of their dependence.

Conclusion:

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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PATENT TRADEMARK OFFICE

Date: April 23, 2003

APPENDIX
VERSION WITH MARKINGS TO SHOW CHANGES MADE
IN THE CLAIMS:

The claims are amended as follows:

Claim 4 (Twice Amended). An electric connecting terminal to be connected to a flat circuit body comprising:

a plane portion; and

a pair of piercing portions erected from opposite side edges of the plane portion and adapted to penetrate through a coating and a conductor of the flat circuit body and fold tips thereof in such a direction as to approach each other, said side edges extending in a longitudinal direction of said terminal

wherein each piercing portion includes a portion which has ~~have~~ an approximately constant width in said longitudinal direction, is located adjacent to the plane portion and penetrates through the conductor.